California Department of Pesticide Regulation
Environmental Monitoring Branch
1001 I Street, Sacramento CA 95814-2828
P.O. Box 4015, Sacramento CA 95812-4015

STANDARD OPERATING PROCEDURE
Determining Height and Slope using the Brunton Clino Master®

KEY WORDS

Slope, height, clinometer

APPROVALS

APPROVED BY: _____ DATE: 5-14-2003
Kean Goh, PhD
Environmental Monitoring Branch Management

APPROVED BY: _____ DATE: 4/25/2003
James Harrington
Dept. of Fish and Game, Consulting Senior Scientist

APPROVED BY: _____ DATE: 4/29/03
Carissa Ganapathy
Environmental Monitoring Branch Quality Assurance Officer

PREPARED BY: _____ DATE: 4/28/03
Juanita Bacey
Environmental Research Scientist

Environmental Monitoring Branch organization and personnel, such as management, senior scientist, quality assurance officer, project leader, etc., are defined and discussed in SOP ADMN002.

STANDARD OPERATING PROCEDURE
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1.0 INTRODUCTION

1.1 Purpose

This Standard Operating Procedure (SOP) discusses the use of the Brunton® clinometer. It provides instructions for measuring angles of elevation, slope, or incline, and determining the height of an object.

1.2 Definitions

1.2.1 Sight – Viewing through the clinometer and placing the internal horizontal line on an object.

2.0 MATERIALS

2.1 Clinometer

2.2 Paper

2.3 Pencil

3.0 PROCEDURES

3.1 Reading the scale

3.1.1 Holding the clinometer vertically, look through the eyesight with one eye and view the internal scales. At the same time, using the other eye, view alongside of the clinometer housing.

3.1.2 An optical illusion is created and the horizontal sighting line within the clinometer will appear to project to the side of the housing. Place this sighting line on your target and read the scale.

3.1.3 The numbers on the left side of the scale represent degrees while the numbers on the right side represent percent.

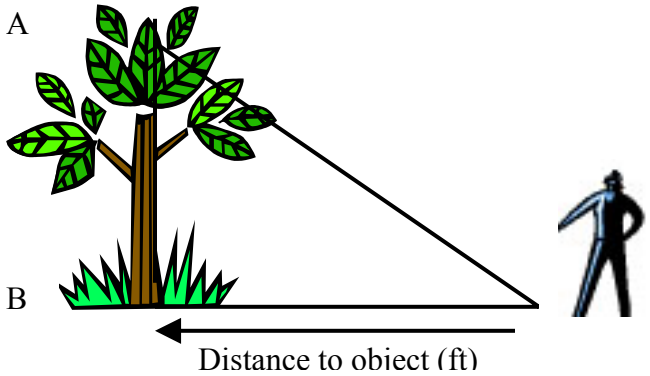
3.2 Determining the height of an object on level ground or from a down slope

3.2.1 Looking through the clinometer sight the top of the object. Read the angle (% A) and record.

3.2.2 Repeat, sighting the base of the object and record (% B).

3.2.3 Measure the distance from where the clinometer reading was taken to the base of the object (ft).

3.2.4 Calculate (% A + % B) x distance (ft) = height in feet



3.3 Determining the height of an object on up-sloping ground (looking up slope)

3.3.1 Repeat steps 3.2.1 through 3.2.3.

3.3.2 Calculate (% A - % B) x distance (ft) = height in feet

3.4 Determining the slope of a surface

3.4.1 Determine or estimate the height of your eye-level.

3.4.2 Looking through the clinometer sight the top of the slope and then fixate on an object or person on the top of that slope that is the same height as your eye-level.

3.4.3 Read the degrees. This is the slope.

4.0 REFERENCES

Brunton Pardner™ Card
Brunton
620 East Monroe Avenue
Riverton, WY 82501
www.brunton.com